No. 200200052

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Turf Merchants, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

FESCUE, TALL

'Focus'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this nineteenth day of November, in the year two thousand and four.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions.*

FORM APPROVED - OMB NO. 0581-0055 EXPIRES 12-31-96

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) *(as it is to appear on the Certificate)*

Turf Merchants, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER

MC2

3. VARIETY NAME

Focus

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*

33390 Tangent Loop Rd
Tangent, OR
97389

5. TELEPHONE *(include area code)*

(541) 926 - 8649

FOR OFFICIAL USE ONLY

PVPO NUMBER

200200052

6. FAX *(include area code)*

(541) 926 - 4435

FILING DATE

December 10, 2001

7. GENUS AND SPECIES NAME

Festuca arundinacea

8. FAMILY NAME *(Botanical)*

Poaceae

FEES RECEIVED

FILING AND EXAMINATION FEE:

$ 2705

DATE

12/10/2001

CERTIFICATION FEE:

$ 432

DATE

9/24/2004

9. CROP KIND NAME *(Common name)*

Tall Fescue

10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)* (Common Name)

Corporation

11. IF INCORPORATED, GIVE STATE OF INCORPORATION

Oregon

12. DATE OF INCORPORATION

03 - 15 - 95

13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS

Steve Tubbs
33390 Tangent Loop Rd.
Tangent, OR 97389

14. TELEPHONE *(include area code)*

(541) 926 - 8649

15. FAX *(include area code)*

(541) 926 - 4435

16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED *(Follow instructions on reverse)*

a. ☒ Exhibit A. Origin and Breeding History of the Variety

b. ☒ Exhibit B. Statement of Distinctness

c. ☒ Exhibit C. Objective Description of the Variety

d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*

e. ☒ Exhibit E. Statement of the Basis of the Applicant's Ownership

f. ☒ Voucher Sample *(2500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in an approved public repository)*

g. ☒ Filing and Examination Fee ($2,450), made payable to "Treasure of the United States" *(Mail to PVPO)*

17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act)

☐ YES *(If "yes," answer items 18 and 19 below)* ☒ No *(If "no," go to item 20)*

18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?

☒ Yes ☐ No

19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDERS SEED?

☒ FOUNDATION ☒ REGISTERED ☒ CERTIFIED

20. HAS THE VARIETY OR HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?

☐ YES *(If "yes," give names of countries and dates)* ☒ NO

21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF APPLICANT *(Owner(s))*		SIGNATURE OF APPLICANT *(Owner(s))*	
NAME *(Please print or type)* Steve Tubbs		NAME *(Please print or type)*	
CAPACITY OR TITLE PRESIDENT	DATE 11-28-01	CAPACITY OR TITLE	DATE

STD-470 (03-96) *(Previous additions are to be destroyed)*

(See reverse for instructions and information collection burden statement)

Exhibit A:

Focus (MC2) Tall Fescue

1) Origin and Breeding History

Focus (MC2) tall fescue (*Festuca arundinacea* Schreb.) is a medium low-growing, dark-green, medium-fine leaved, turf-type tall fescue selected from the maternal progenies of 33 clones. Sixty-five percent of the parental germplasm contain the *Neotyphodium endophyte.*

The parental germplasm of Focus (MC2) tall fescue traces its origin to plants selected from old turfs of the United States in a germplasm collection program initiated in 1962, to plants selected from or related to Rebel tall fescue (Funk et al., 1981). Four percent of the germplasm was selected from or related to Titan tall fescue. Approximately 10 percent trace to plants collected from Maryland. Attractive cones were selected from old turfs in Birmingham, AL; Athens, Atlanta, and Millegeville, GA; Preston, ID; Baltimore, MD; Bayonne, Jersey City, Elizabeth, Princeton, and Cape May, NJ; eastern North Carolina; Philadelphia, PA; Nashville, TN; Lexington, KY; Cincinnati, OH; Dallas, TX; and northern Mississippi. The tall fescue plants selected from old turfs were of unknown origin. All were large patches of turf surviving in stressful environments indicating that they had persisted and developed over a period of many years.

A few hundred attractive, turf-type plants were collected and established in spaced-plant nurseries and/or frequently mowed clonal evaluation trials at Rutgers University. All but a few dozen of the most promising plants were quickly discarded. The best selections were very different from any tall fescue variety in existence at the time of collection. They produced lower-growing turfs with finer leaves. greater density, darker color, and greater tolerance of close mowing.

The most promising plants were identified by their persistence and appearance in old turfs and their performance in spaced-plant nurseries, mowed clonal evaluation tests, and single-plant progeny trials under turf maintenance. Intercrosses of the best performing plants were subjected to varying cycles of phenotypic and genotypic selection depending on their date of collection. New sources of germplasm were added to the breeding program as it became available from the continuing collection program. Each cycle of selection showed continued progress in producing lower-growing, darker green, attractive plants with improved turf performance scores. Selection was also effective in maintaining high seed yields and

good stress tolerance. Substantial progress was made in developing moving, and increased density.

Large numbers of single-plant progenies were seeded in turf evaluation trials at the Plant Science Research Farm at Adelphia, NJ in 1991, 1992, 1993 and 1995. An additional test was established at the Rutgers turfgrass research facility in North Brunswick, NJ in 1992. The plants selected for progeny evaluation were selected from spaced-plant nurseries at Adelphia following varying cycles of phenotypic and genotypic selection of germplasm selected from old turfs and germplasm selected from or related to Rebel tall fescue.

Following a period of summer stress due to heat, drought and disease in 1996 and 1997, plants were selected from the best performing single-plant progeny turf plots. Three nurseries were established in 1996 from the best performing turf plots from the 1992 tall fescue test at North Brunswick, and the 1991, 1993, and 1995 tests at Adelphia, totaling 6,060 plants. These were selected from 2,065 single-plot progenies from twenty-five different populations. In addition, two nurseries were established in the spring of 1997. The first, consisting of a total of 1,020 plants, was selected from large persistent clonal patches from 1.060 single-plot progeny turf plots from 17 populations from the 1992 tall fescue tests at Adelphia and North Brunswick, NJ. The second, consisting of 2,400 plants was selected from the best performing turf plots from the 1995 and 1996 tall fescue tests at Adelphia, NJ. These were chosen from 2,085 plots consisting of twenty-one different populations. Selection of progenies was based on performance records as well as appearance at the time the plants were selected from these progeny plots. Selection of plants from each progeny was based on attractive dark green color, medium-fine leaves, abundant tillering, and freedom from disease. Selected plants were transferred to a greenhouse and subsequently established to the spaced-plant field nurseries at Adelphia in 1996 and the spring of 1997. In the spring of 1998, forty-six plant were selected from those nurseries for characteristics such as medium maturity, dark green color, intermediate shoot density, semi-dwarf growth habit, freedom from disease and high seed yield potential and moved, prior to anthesis, to an isolated crossing block at Adelphi. Forty-three plants from twenty-three different lines were harvested from the crossing block for high seed yield, excellent floret fertility and freedom from disease. In the fall of 1998, one turf plot of each line was established at Adelphia and one gram of seed from each plant was sent to Advanta Seeds Pacific for increase and further nursery evaluation. (43 progeny lines = 2,580 plants; removed 524 plants, 7 complete progeny lines)

In 1998 a seed increase block containing 60 plants of 43 progeny lines (total 2,580 plants), was established in Albany, Oregon. In 1999 negative mass selection was used and 20.31% of the plants were rogued from the population. The remaining plants were harvested

in bulk and the seed was used to establish a morphological nursery for Plant Variety Protection (PVP) measurements.

References:

1) Buckner, Robert C., Jerrell B. Powell, and Rod V. Frakes. 1979. Historical Development, in Buckner, Robert C., and Lowell P. Bush (editors) Tall Fescue. Agronomy Monograph 20. American Society of Agronomy, Crop Science Society of America, Soil Science Society of America, Publishers. Madison, Wisconsin pages 1 - 8.

2) Funk, C.R., Engel, W.K. Dickson, and R.H. Hurley. 1981. Registration of Rebel tall fescue. Crop Science 21:632.

1) Origin and Breeding History continued:

1)	1962 - 1994:	Germplasm collection, evaluation, and genetic improvement.
2)	1991 - 1995:	Planted single-plant progenies of plants selected from current cycles of population improvement programs in closely mowed turf trials at Adelphia and North Brunswick, NJ.
3)	1996 - 1997:	Selected 9,480 plants from 63 of the best performing single-plant progeny turf plots planted in 1991, 1992, 1993, and 1995. Established selected plants in spaced-plant nurseries at Adelphia, NJ.
4)	1998 - Spring:	Moved 46 plants with medium maturity, dark green color, intermediate shoot density, semi-dwarf growth habit, freedom from disease and high seed yield potential to an isolated crossing block. Harvested from 43 plants with excellent appearance and floret fertility.
5)	1998 - Fall:	A seed increase block containing 60 plants of the 43 progeny lines was established in Albany, OR.
6)	1999:	Negative mass selection was used and 20.31% of the plants were removed from the population. The remaining plants were harvested in bulk and designated breeder seed. A morphological nursery was established in the fall.

7) 2000 - 2001: Morphological measurements were taken.

Each Plant of Focus (MC2) tall fescue traces at least 20% of its ancestral germplasm to plants selected from or related to Rebel tall fescue, 4% to plants selected from or related to Titan tall fescue. Approximately 10% traces to plants collected from Maryland and 66% to plants selected from old turf areas of the United States in a germplasm collection program initiated in 1962.

2) Breeder Seed Maintenance:

A breeder seed block was planted in isolation in 1998. Breeder seed was harvested in bulk (20.31 % rogued), in 1999 and is maintained in cold storage. Seed propagation is limited to three generations, one each of foundation, registered, and certified. Foundation fields were planted in 2000.

3) Stability and Uniformity:

Focus is a stable, uniform cultivar. Stability and uniformity has been observed in breeder and foundation seed multiplications (two generations), seed yield rows, and turf plots. Neither off-type or variant plants have been observed in the multiplication process.

Exhibit B

Novelty Statement for Focus (MC2) Tall Fescue

The following summary outlines the distinctive characteristics of Focus. The novelty of Focus is based on the unique combination of these characteristics. Focus is most similar to Plantation, but may be differentiated by using the following criteria:

1) The heading date of Focus is at least 5 day earlier than Plantation (tables 1A, 1B).

2) Focus has an anthesis date of at least 1 day earlier than Plantation (tables 1A, 1B).

3) The leaf blade length of Focus is at least 3 cm shorter than Plantation (tables 1A, 1B).

4) Focus exhibits a lower frequency of plants with an erect growth habit than Plantation (tables 3A, 3B).

5) Focus exhibits an increased frequency of 3 or more branches of the lower most whorl compared to Plantation (tables 3A,3B).

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY PROGRAM
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(TALL & MEADOW FESCUES)

OBJECTIVE DESCRIPTION OF VARIETY
TALL & MEADOW FESCUES
(*Festuca* spp.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
Turf Merchants, Inc.	MC2	Focus

ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)

33390 Tangent Loop Dr.
Tangent, Oregon
97389

FOR OFFICIAL USE ONLY
PVPO NUMBER
200200052

Place the appropriate number that describes the varietal characteristics of this variety in the boxes below. Use leading zeroes when necessary (e.g. 089). Characteristics described, including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors. Characteristics marked with an asterisk * are characteristics which should be recorded.

* 1. SPECIES: (With comparison varieties, use varieties within the species of the application variety)

__1__ 1 = *F. arundinacea* (Tall)

Turf Types

1 = Kentucky 31 2 = Rebel 3 = Olympic 4 = Bonanza 5 = Arid 6 = Rebel II

7 = Shortstop 8 = Silverado 9 = Rebel Jr. 10 = Mini Mustang 11 = Crewcut 12 = Bonsai

Forage Types

20 = Kentucky 31 21 = Martin 22 = Forager 23 = Mozark

24 = Kenhy 25 = AU Triumph 26 = Fawn 27 = Cajun

_____ 2 = *F. pratensis* (Meadow)

30 = Admira 31 = Beaumont 32 = Comtessa 33 = Ensign 34 = Trader

* 2. CYTOLOGY:

___2N=42___ Chromosome Number

3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)

__0__Transition Zone __2__West __2__ Northeast _____ Other (Specify):_____

* 4. MATURITY: (Date First Headed, 10% of Panicle Emergence)

__4__ Maturity Class 1 = Very early ( ) 2 = AU Triumph 3 = Early (Fawn) 4 = K31, Kenhy 5 = Medium (Rebel)

4. MATURITY: (continued)

6 = Bonanza 7 = Late (Silverado) 8 = ( ) 9 = Very late

Date Headed __Day 30, days after April 1,___ Location _Albany, Oregon_____

_____ Days earlier than _____
Maturity same as __1__
_____Days later than _____
} Comparison Variety

---

* 5. MATURE PLANT HEIGHT CM: (Average of 100 culms from crown to top of panicle, if panicle is nodding, straighten)

_106_.40_ cm Height

_29_.20 cm Shorter than _1_
Height same as ___
__ __.__ cm Taller than ___
} Comparison Variety

* INTERNODE LENGTH CM: (First internode subtending the flag leaf)

__20_.60 cm InternodeLength

__ 7_.93cm Shorter than _1_
Length same as ___
__ __.__ cm Longer than ___
} Comparison Variety

* HEIGHT AT EAR EMERGENCE CM: (Flag leaf height from crown to flag leaf node)

__ 49.57 cm Height

__ 27.76 cm Shorter than _1_
Height same as ___
__ __.__ cm Taller than ___
} Comparison Variety

---

* 6. GROWTH HABIT: (Mature Plants)

_6_ 1 = Prostrate ( ) 3 = Semiprostrate ( ) 5 = Horizontal ( )

7 = Semierect (Rebel) 9 = Erect (Mini Mustang) See table 3

---

* 7. RHIZOMES (Psuedo):

__ __.__ mm Length _1_1 = Absent (1) 2 = Rare (Rebel) 3 = Common ( )

---

* 8. LEAF BLADE: (Tiller leaves/ turf color)

*_6_ Color: 1 = Light green ( ) 2=KY-31 3 = Medium light green ( ) 5 = Green ( )

7 = Medium dark green ( ) 9 = Very dark green ( )

__2___ Specify rating of comparison variety

*_1_ Anthocyanin: 1 = Absent (1) 9 = Present ( )

*_1_ Basal Hairs: 1 = Absent (1) 9 = Present ( )

*_7_ Margins: 1 = Smooth ( ) 5 = Semi-rough ( ) 9 = Rough (1)

8. LEAF BLADE: (continued)

*_5_Width Class: 1 = Very coarse ( ) 3 = Coarse (1) 5 = Medium ( )
7 = Fine ( ) 9 = Very Fine ( )

* TILLER LEAF LENGTH CM: (First leaf subtending the flag leaf)

__31_.50 cm Tiller Leaf Length

__ 11.77 cm Shorter than _1_
Length same as ___
__ __.__ cm Taller than ___
} Comparison Variety

* TILLER LEAF WIDTH MM:

_8.67 mm Tiller Leaf Width

_1.0_ mm Narrower than_1_
Width same as ___
__.__ mm Longer than ___
} Comparison Variety

FLAG LEAF LENGTH CM:

__37_.33 cm Flag Leaf Length

11.87 cm Shorter than _1_
Length same as ___
__.__ cm Longer than ___
} Comparison Variety

FLAG LEAF WIDTH MM:

_6.67 mm Flag Leaf Width

__.__ mm Narrower than ___
Width same as _1_
__.__ mm Wider than ___
} Comparison Variety

* 9. LEAF SHEATH: (Basal Portion)

*___ Anthocyanin (seedling): 1 = Absent (K31) 9 = Present ( )

*_9_ Auricle Hairiness: 1 = Absent ( ) 9 = Present (1) 90% See table4

* 10. PANICLE: (At seed maturity except where noted.)

*_1_ Shape: 1 = Narrow-tapering ( ) 5 = Ovate ( ) 7 = Oblong (1) 9 = Other (specify)

*_1_ Type: 1 = Compact (appressed) 5 = Intermediate ( ) 7 = Open (1) 9 = Other (specify)

*_9_ Orientation: 1 = Nodding ( ) 5 = KY-31 9 = Erect ( )

*_1_ Branch Pubescence: 1 = Glabrous (1) 9 = Pubescent ( )

*_1_ Anther Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green
4 = Purplish 5 = Reddish 6= Other (Specify)

*_1_ Glume Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green
4 = Purplish 5 = Reddish 6= Other (Specify)

*_80.20 cm Panicle Length (from base to tip, if nodding, straighten; after anthesis)

_9.27 cm Shorter than _1_
Length same as ___
__.__ cm Longer than ___
} Comparison Variety

* 11. SEED: (With Lemma & Pelea) 20020052

*__ _2949__ mg per 1000 seeds

__ 473__ mg Less than _1_
Weight same as ___
__ __ __ mg More than ___
} Comparison Variety

PALEA: (Keels or Margins) _3_ Hairs: 1 = Absent ( ) 5 = Short (Missouri 96) 9 = Long ( )

LEMMA: _1_ Hairs: 1 = Absent (Kenhy) 5 = Several ( ) 9 = Many (Missouri 96)

_4.57 mm Lemma Length (Mature)

__.__ mm Shorter than ___
Length same as _1_
__.__ mm Longer than ___
} Comparison Variety

_1.20_ mm Lemma Width

__.__ mm Narrower than ___
Width same as _1_
__.__ mm Wider than ___
} Comparison Variety

*AWNS: _9_ AWNS: 1 = Absent ( ) 9 = Present (Falcon) _100_% Plants with awns

_1.40_ mm Awn length (Of those present.)

__.__ mm Shorter than ___
Length same as _1_
__.__ mm Longer than ___
} Comparison Variety

12. DISEASE, INSECT, AND NEMATODE REACTION: (0= Not Tested 1= Least Resistant 9= Most Resistant)

_0_ Melting-out *Drechslera poae*
_0_ Leaf Spot *D. siccans*
_0_ Net Blotch *D. dictyoides*
_0_ Brown Patch *Rhizoctonia solani*
_0_ C. Leaf Spot *Cercospora fectucae*
_0_ Pink Snow Mold *Gerlachia nivalis*
_0_ Silver Top *F. tricinctum, F. roseum*
___ Other Disease _____
___ Other Insect _____
___ Other Nematode _____

_0_ Blind Seed *Gloeotinia temulenta*
_0_ Dollar Spot *Lanzia, Mollerdiscus* spp.
_0_ Stem Rust *Puccinia graminis*
_0_ T. Blight *Typhula incarnata*
_0_ Pythium Blight *Pythium* spp.
_0_ Powdery Mildew *Erysiphe graminis*
_0_ Crown Rust *Puccinia coronata*

13. ENVIRONMENTAL STRESS

_5_ Drought Stress 1 = Susceptible ( ) 5 = Tolerant (1) 9 = Resistant ( )
_5_ Shade Stress 1 = Susceptible ( ) 5 = Tolerant (1) 9 = Resistant ( )

13. ENVIRONMENTAL STRESS: (continued)

_5_ Winter Stress 1 = Susceptible ( ) 5 = Tolerant (1) 9 = Resistant ( )

14. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics, indicate the degree of resemblance with the following scale:

1 = Application variety is less than comparison variety 2 = Same as 3 = More than, better, greater, darker, etc.

Character	Varieties	Rating	Character	Varieties	Rating
Leaf Width	KY-31	1	Leaf Color	KY-31	3
Panicle Color	KY-31	2	Panicle Shape	KY-31	3
Seed Size	KY-31	1	Cold Injury	KY-31	3
Winter Color	KY-31	3	Heat	KY-31	3
Disease	KY-31	3			

* 15. EXPERIMENTAL: Give a brief summary of the experimental design utilized to collect the data used on this form. Cultural conditions, number of plants measured and plant spacing must be specified.

A morphological nursery designated 99PVPFA1 was established in September of 1999, in Albany, Oregon. Experimental design consisted of 9 entries; 4 replications per entry; 20 plants per replication; for a total of 80 plants per entry. KY-31 and SR 8250 were used as standards. Plants were established on 2.5 foot enters with a skip row between replications and between entries.

The nursery received 30 pounds of nitrogen per acre rate following establishment and 50 pounds of nitrogen per acre per year in 2000 and 2001. The fertilizer source was 15-15-15 and was applied as a split application with ½ applied in the spring and ½ in the fall. The nursery was sprayed twice each spring, 3 weeks between applications, with Tilt (2 oz/acre rate), to prevent stem rust. One pound of Karmex per acre rate was applied during late summer to prevent emergence of volunteer seedlings.

Data was analyzed using analysis of variance for a randomized complete block design. Means were calculated for each replication and then analyzed.

Exhibit D:

Additional Description

Focus (MC2) Tall Fescue

Focus is an improved turf-type tall fescue. It exhibits a dwarf growth habit (tables 1A,1B) compared to previously released tall fescue cultivars such as KY-31. It has an earlier heading date than Plantation and SR 8250 (tables 1A, 1B). The length of the leaf blade is shorter than both KY-31 and Plantation (tables 1A, 1B). The panicle length is significantly different than both KY-31 and SR 8250 (tables 1A, 1B). Focus exhibits a shorter awn length than the cultivar SR 8250 (tables 2A, 2B). Focus is significantly different in the morphological characteristics spikelets per panicle and spike length than SR 8250 and KY-31 (tables 2A, 2B). Plantation and SR 8250 exhibit a more erect growth habit than Focus (tables 3A, 3B).

Panicle Type Inflorescence

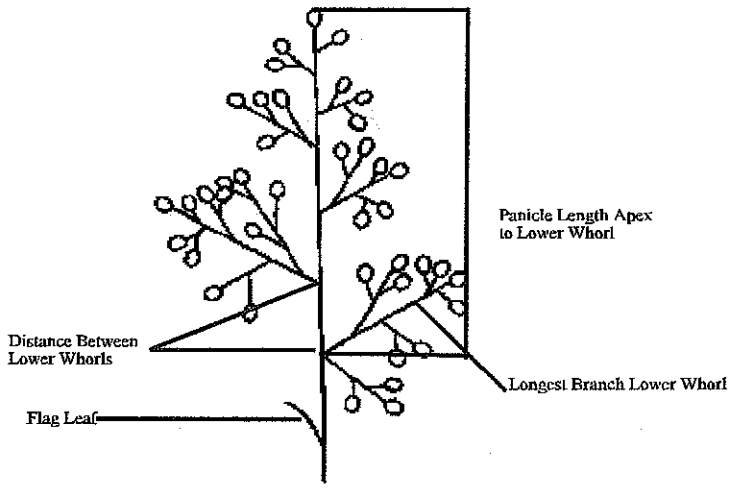

Illustration 1.

Table 1A

2000 Morphological Data

Cultivar	Heading Date (days after April 1)	Anthesis Date (days after April 1)	Genetic Color	Mature Plant Height (cm)	Plant Width (cm)	Panicle Length (cm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Flag Leaf Internode Length (cm)	Leaf Blade Length (cm)	Leaf Blade Width (mm)	Leaf Blade Height (cm)	Leaf Sheath Length (cm)
Focus (MC-2)	30.00	62.00	4.67	106.40	20.93	80.20	37.33	6.67	49.57	24.43	20.60	31.50	8.67	17.43	12.53
Plantation	35.67	63.33	5.00	112.23	19.47	83.53	41.40	6.67	53.33	27.27	22.57	34.90	8.67	19.30	14.00
SR 8250	36.33	63.67	5.00	102.87	19.80	73.93	34.97	6.00	51.00	24.17	22.23	31.00	8.00	17.73	12.67
KY-31	29.67	59.33	2.00	135.60	22.9	89.47	49.20	7.00	77.33	33.97	28.53	43.27	9.67	33.47	18.63
LSD 5%	1.20	0.80	0.43	5.61	2.29	4.58	2.62	1.30	4.81	1.77	1.70	2.61	0.82	2.43	1.06
C.V.	2.53	0.90	6.57	3.53	7.89	4.01	4.66	14.58	6.09	4.72	5.20	5.45	6.85	8.43	5.42

Measurements taken in Albany, Oregon; 4 reps; 20 plants/rep = 80 data points
■ Cultivar under evaluation
▬ significant difference over two years one location.
▬ significant difference over one year one location.

Table 1B

2001 Morphological Data

Cultivar	Heading Date (days after April 1)	Anthesis Date (days after April 1)	Genetic Color	Mature Plant Height (cm)	Plant Width (cm)	Panicle Length (cm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Flag Leaf Internode Length (cm)	Leaf Blade Length (cm)	Leaf Blade Width (mm)	Leaf Blade Height (cm)	Leaf Sheath Length (cm)
Focus (MC-2)	28.00	57.00	5.67	104.93	30.83	70.13	41.47	5.00	60.43	25.27	22.40	39.90	6.00	29.03	16.20
Plantation	33.67	58.67	5.33	108.73	30.27	70.37	42.93	5.00	62.37	26.13	23.47	43.80	6.00	30.07	16.97
SR 8250	34.67	59.00	5.67	101.13	30.43	62.20	38.50	4.33	61.13	24.23	23.33	38.10	5.33	32.10	15.50
KY-31	24.33	56.33	2.00	136.13	31.70	80.13	52.97	6.33	88.20	34.43	24.77	55.63	8.33	51.77	22.80
LSD 5%	2.43	0.81	0.47	5.94	1.41	4.00	3.80	0.87	4.96	1.95	1.62	3.03	0.62	4.70	1.30
C.V.	2.83	0.98	6.48	3.84	3.28	4.06	6.38	12.53	5.40	5.25	4.87	5.15	7.31	10.19	5.48

Measurements taken in Albany, Oregon; 4 reps; 20 plants/rep = 80 data points
■ Cultivar under evaluation
▬ significant difference over two years one location.
▬ significant difference over one year one location.

Table 2A

2000 Laboratory Morphological Data

Cultivar	Lemma Length (mm)	Lemma Width (mm)	Lemma Awn Length (mm)	Palea Length (mm)	Palea Width (mm)	Glume Length (mm)	Florets per Spikelet	Spikelet Length (mm)	Length of Longest Whorl (mm)	Distance Between Lower Most Whorls (mm)	Number of Spikelets on the Longest Whorl	Spikelets per Panicle	Length of Spike from Lower most Whorl to Tip (mm)
Focus (MC-2)	4.57	1.20	1.40	4.53	1.2	4.07	8.00	13.13	111.47	61.73	14.33	83.33	236.67
Plantation	4.53	1.20	1.57	4.63	1.2	4.03	7.33	12.00	102.03	60.33	16.00	85.33	232.67
SR 8250	4.57	1.17	1.80	4.60	1.13	4.30	8.67	13.47	88.50	56.53	11.33	63.67	192.33
KY-31	4.63	1.17	1.53	4.87	1.20	4.60	8.67	15.10	123.93	77.40	15.33	99.00	301.33
LSD	0.37	0.09	0.25	0.27	0.08	0.33	0.86	0.83	16.38	5.81	3.41	14.31	28.55
C.V.	5.79	5.25	10.60	4.17	4.80	5.41	7.62	4.56	11.28	6.66	16.84	12.22	8.66

Measurements taken in Albany, Oregon; 4 reps; 20 plants/rep = 80 data points
- Cultivar under evaluation
- significant difference over two years one location.
- significant difference over one year one location.

Table 2B

2001 Laboratory Morphological Data

Cultivar	Lemma Length (mm)	Lemma Width (mm)	Lemma Awn Length (mm)	Palea Length (mm)	Palea Width (mm)	Glume Length (mm)	Florets per Spikelet	Spikelet Length (mm)	Length of the Longest Whorl (mm)	Distance Between Lower Most Whorls (mm)	Number of Spikelets on the Longest Whorl	Spikelets per Panicle	Length of Spike from Lower most Whorl to Tip (mm)
Focus (MC-2)	4.97	1.30	2.07	6.00	1.20	4.37	4.00	9.30	78.93	52.00	11.67	78.67	227.00
Plantation	4.90	1.30	2.17	6.27	1.17	4.53	3.67	9.43	75.67	50.90	12.00	81.67	222.67
SR 8250	4.90	1.37	2.47	6.27	1.23	4.57	4.33	10.03	72.60	46.30	11.00	63.00	191.33
KY-31	5.80	1.37	2.13	7.07	1.27	5.17	4.33	11.13	97.53	65.53	13.67	103.67	291.00
LSD	0.46	0.08	0.37	0.25	0.07	0.24	0.57	0.53	7.86	4.44	1.97	9.06	19.02
C.V.	6.57	3.99	11.57	2.79	4.02	3.66	10.25	3.92	6.97	5.99	11.50	7.86	5.89

Measurements taken in Albany, Oregon; 4 reps; 20 plants/rep = 80 data points
- Cultivar under evaluation
- significant difference over two years one location.
- significant difference over one year one location.

Table 3A

2000 Additional Morphological Measurements of the Panicle

Cultivar	Growth Habit at Anthesis % Prostrate	Growth Habit at Anthesis % Semi-Prostrate	Growth Habit at Anthesis % Erect	Anther Color % Purple	Panicle Color % Purple	Lemma Awn % Present	Glume Color % Purple	Panicle Orientation % Nodding	Panicle Shape % Oblong	Panicle Type % Open	Panicle Branch Pubescence % Present	Branch Lower Whorl =1	Branch Lower Whorl =2	Branch Lower Whorl =3	Branch Lower Whorl =4	Branch Lower Whorl =5
Focus (MC-2)	0	32	68	3	28	100	18	17	22	22	0	10	70	17	3	0
Plantation	0	13	87	7	18	100	5	5	25	25	0	17	77	7	0	0
SR 8250	0	18	82	8	20	100	5	5	25	25	0	15	85	0	0	0
KY-31	0	87	13	13	28	100	12	32	23	23	0	10	72	15	3	0

Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
■ Cultivar under evaluation

Table 3B

2001 Additional Morphological Measurements of the Panicle

Cultivar	Growth Habit at Anthesis % Prostrate	Growth Habit at Anthesis % Semi-Prostrate	Growth Habit at Anthesis % Erect	Anther Color % Purple	Panicle Color % Purple	Lemma Awn % Present	Glume Color % Purple	Panicle Orientation % Nodding	Panicle Shape % Oblong	Panicle Type % Open	Panicle Branch Pubescence % Present	Branch Lower Whorl =1	Branch Lower Whorl =2	Branch Lower Whorl =3	Branch Lower Whorl =4	Branch Lower Whorl =5
Focus (MC-2)	3	52	45	0	15	100	0	7	20	20	0	28	65	7	0	0
Plantation	0	28	72	0	25	100	0	2	32	32	0	27	72	2	0	0
SR 8250	3	22	75	3	17	100	2	0	20	20	0	32	63	3	2	0
KY-31	10	48	42	0	20	100	2	53	50	50	0	22	73	3	2	0

Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
■ Cultivar under evaluation

Table 4A

2000 Additional Morphological Measurements of the Leaf Blade

Cultivar	Anthocyanin Present in the Leaf Blade % Purple	Leaf Blade Margin Roughness to Touch % Smooth	Leaf Blade Margin Roughness to Touch % Semi-Rough	Leaf Blade Margin Roughness to Touch % Rough	Leaf Blade Margin Hairs % Present	Leaf Sheath Auricle Hairs % Present	Node Color % Distinct	Lemma Awn % Present	Lemma Hairs % Present	Palea Hairs % Present	Rhizomes % Present	Seed Weight (mg per 1,000 seeds)
Focus (MC-2)	0	20	25	55	100	90	15	100	0	100	0	2950
Plantation	2	25	20	55	98	83	5	100	0	100	0	2509
SR 8250	0	20	37	43	100	82	10	100	0	100	0	2019
KY-31	0	75	18	7	100	80	77	100	0	100	0	2930

Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
■ Cultivar under evaluation

Table 4B

2001 Additional Morphological Measurements of the Leaf Blade

Cultivar	Anthocyanin Present in the Leaf Blade % Purple	Leaf Blade Margin Roughness to Touch % Smooth	Leaf Blade Margin Roughness to Touch % Semi-Rough	Leaf Blade Margin Roughness to Touch % Rough	Leaf Blade Margin Hairs % Present	Leaf Sheath Auricle Hairs % Present	Node Color % Distinct	Lemma Awn % Present	Lemma Hairs % Present	Palea Hairs % Present	Rhizomes % Present	Seed Weight (mg per 1,000 seeds)
Focus (MC-2)	0	73	12	15	80	87	7	100	0	100	0	2949
Plantation	0	82	8	10	83	95	5	100	0	100	0	3022
SR 8250	0	88	7	5	85	90	17	100	0	100	0	2843
KY-31	0	80	10	10	87	87	28	100	0	100	0	3422

Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
■ Cultivar under evaluation

REPRODUCE LOCALLY. *Include form number and date on all reproductions.* FORM APPROVED - OMB NO. 0581-0055 EXPIRES 12-31-96

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine is a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Turf Merchants, Inc	MC2	Focus

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*	5. TELEPHONE *(include area code)*	6. FAX *(include area code)*
33390 Tangent Loop Rd. Tangent, OR 97389	(541) 926 - 8649	(541) 926 - 4435

7. PVPO NUMBER 200200052

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block.* If no, please explain. [X] YES [ ] NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company?
If no, give name of country _____ [X] YES [ ] NO

10. Is the applicant the original breeder? If no, please answer the following: [X] YES [ ] NO

a. If original rights to variety were owned by individual (s):
Is (are) the original breeder(s) a U.S. national(s)? If no give name of country _____

[X] YES [ ] NO

b. If original rights to variety were owned by a company:
Is the original breeder(s) U.S. based company? If no give name of country _____

11. Additional explanation on ownership (*If needed, use reverse for extra space*):

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter.

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STD-470-E (03-96)